

UBE2G2 Antibody / Ubiquitin-conjugating enzyme E2 G2 Antibody (FY13535)

Catalog No.	Formulation	Size
FY13535	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

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Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na ₂ HPO ₄ .
UniProt	P60604
Applications	Western Blot : 0.5-1ug/ml Immunohistochemistry (FFPE) : 2-5ug/ml Flow Cytometry : 1-3ug/million cells ELISA : 0.1-0.5 ug/ml
Limitations	For research use only, this UBE2G2 Antibody / Ubiquitin-conjugating enzyme E2 G2 Antibody is not intended for diagnostic or therapeutic use.

UBE2G2 Antibody by IHC in rat testis. Immunohistochemistry of paraffin-embedded rat testis using Ubiquitin-conjugating enzyme E2 G2 Antibody reveals brown staining in cells of the seminiferous tubules, with hematoxylin-counterstained nuclei. Heat-mediated antigen retrieval was performed in EDTA buffer at pH 8.0. After blocking with 10% goat serum, sections were incubated with primary antibody at 2 ug/mL overnight at 4oC. Peroxidase-conjugated secondary antibody and DAB chromogen were used for visualization. The tissue image demonstrates UBE2G2-associated immunoreactivity within the testicular compartment.

UBE2G2 Antibody by WB in human and rodent lysates. Western blot analysis with Ubiquitin-conjugating enzyme E2 G2 Antibody detects a band near 17 kDa in HeLa (lane 1), K562 (lane 2), MCF-7 (lane 3), rat testis (lane 4), rat L6 cells (lane 5), mouse testis (lane 6), and NIH/3T3 cells (lane 7). The observed migration is close to the calculated molecular weight of approximately 18.6 kDa. Reduced lysates containing 30 ug protein per lane were resolved by 12% SDS-PAGE and transferred to nitrocellulose. Primary antibody was applied at 0.5 ug/mL overnight at 4oC, followed by HRP-linked secondary antibody and chemiluminescent detection.

UBE2G2 Antibody by FACS in mouse 3T3-L1 cells. Flow cytometric analysis using Ubiquitin-conjugating enzyme E2 G2 Antibody shows a rightward shift of stained 3T3-L1 cells (blue trace) relative to the rabbit IgG isotype control (green) and unstained cells (red). Cells were fixed in 4% paraformaldehyde and permeabilized before blocking with 10% goat serum. Primary antibody was applied at 1 ug per 1 x 10⁶ cells for 30 minutes at 20oC, followed by DyLight 488-conjugated secondary antibody. The histogram demonstrates an antibody-associated intracellular fluorescence signal.

UBE2G2 Antibody by FACS in RT4 cells. Flow cytometric analysis using Ubiquitin-conjugating enzyme E2 G2 Antibody demonstrates increased fluorescence in stained RT4 cells (blue trace) compared with the isotype control (green) and unstained control (red). Cells were fixed with 4% paraformaldehyde, permeabilized, and blocked with 10% goat serum. Primary antibody was incubated at 1 ug per 1 x 10⁶ cells for 30 minutes at 20oC. DyLight 488-conjugated secondary antibody was used for detection. This second cell model provides complementary evidence of antibody-associated UBE2G2 staining.

Description

UBE2G2 Antibody / Ubiquitin-conjugating enzyme E2 G2 Antibody detects UBE2G2, an E2 ubiquitin-conjugating enzyme that participates in the transfer of ubiquitin to selected protein substrates. Ubiquitination involves an ordered enzymatic cascade in which an E1 enzyme activates ubiquitin, an E2 enzyme carries activated ubiquitin, and an E3 ligase helps determine substrate selection and the resulting modification. UBE2G2 is particularly associated with endoplasmic reticulum-associated degradation, a quality-control pathway that removes proteins that fail to fold or assemble correctly. By supporting ubiquitin attachment, UBE2G2 helps connect recognition of problematic proteins to their eventual disposal.

During endoplasmic reticulum-associated degradation, selected substrates are moved toward the cytosolic side of the membrane and marked for processing by the proteasome. UBE2G2 cooperates with particular membrane-associated ubiquitin ligase complexes, including systems involving the ligase AMFR, also called gp78. The organization of these complexes helps coordinate substrate ubiquitination with extraction and degradation. UBE2G2 can contribute to ubiquitin-chain formation, an important step in creating signals recognized by the cellular protein-quality-control machinery. Its activity depends on the associated E3 ligase and other pathway components rather than functioning independently of them.

The endoplasmic reticulum must continually balance protein production, folding capacity, and removal of defective products. Disturbances in this balance can activate stress-response pathways and alter cellular physiology. UBE2G2 therefore participates in a fundamental mechanism for maintaining proteostasis, especially for proteins processed through the secretory pathway. The Ubiquitin-conjugating enzyme E2 G2 Antibody designation identifies this specific E2 enzyme rather than ubiquitin-conjugating enzymes as a group. NSJ Bioreagents offers the UBE2G2 Antibody in connection with this regulated protein-degradation pathway. A UBE2G2 Antibody is relevant to understanding the molecular functions and regulatory pathways associated with UBE2G2.

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Application Notes

An appropriate dilution of the UBE2G2 Antibody / Ubiquitin-conjugating enzyme E2 G2 Antibody should be determined empirically before routine use.

Immunogen

The UBE2G2 Antibody was generated using e. coli-derived human UBE2G2 recombinant protein (amino acids M1-L165).

Storage

After reconstitution, keep the UBE2G2 Antibody at 4°C for up to one month. Alternatively, store aliquots at -20°C for up to six months. Avoid multiple freezing and thawing cycles.

Alternate Names

UBE2G2 antibody, Ubiquitin-conjugating enzyme E2 G2 antibody, ubiquitin conjugating enzyme E2 G2 antibody, E2 ubiquitin-conjugating enzyme G2 antibody, Ubiquitin carrier protein G2 antibody, Ubiquitin-protein ligase G2 antibody